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Directed Classrooms

Effective Reading Programs: Elementary Secondary **IDENTIFIERS** 

Education Act Title III; ESEA Title III; \*Exemplary

Reading Programs: Right to Read

### ABSTRACT

One of the twelve exemplary programs summarized in the Introduction to Right to Read's "Effective Reading Programs: Summaries of 222 Selected Programs" (CS001934), this program is designed to accommodate all types of learners in the same multigraded classroom. Reading skills study each day begins with a planning circle, where each student may consider the activities available and, with the teacher's help, choose the mode of learning in which he or she can be most successful. Activities are done in small groups, in pairs, or individually until the end of the period, when all the students meet to evaluate their progress. At the sixth-grade achievement level in the student's individual program, reading widely, discussing what has been read, and learning techniques to increase reading comprehension are stressed. (TO/AIR)

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PROGRAM AREA: Reading

PROJECT TITLE: The Hawaii English Program

LOCATION: State of Hawaii

SOURCES AND LEVEL OF FUNDING: State General Funds: \$4.471.060 (100% of cost:

original project development aided by Title III fund

PROGRAM START DATE: Curriculum development, 1966; statewide use, 1970

## BRIEF DESCRIPTION OF PROJECT:

Goals and objectives. The Hawaii English Program (HEP) was designed to develop mastery of language skills, a concept of language as means of communication, and an appreciation of literature. In conjunction with these aims, the program provides specific objectives, varied materials, and a management and record-keeping system to help teachers train students in making decisions about their own individual classroom work.

Context. The program is now operating in all 170 elementary schools in the State of Hawaii. The children involved come from families of different races, mostly white and Oriental, from all income levels, from cities, towns, and rural areas, and from varied language backgrounds inlouding English, Chinese, Japanese, and Hawaiian.

# Program Description.

Grade levels, years of operation, size--The program began operating in one classroom per school throughout the state in 1970, and now includes a total of 50.730 children in grades K-6.

Staffing, preservice/inservice training--The staffing pattern for the program is generally one teacher per 25 students. Some Hawaii schools use classes with 60 students and three teachers or two teachers and one paraprofessional. There are no special administrative staff requirements, and paraprofessionals are not required; the only other staff requirement is for qualified personnel to carry out the evaluation plan. About 64 hours of training provided for the teachers, focusing on the use of HEP materials and on classroom management of an individualized program. A detailed instruction manual for the teacher accompanies the program.

Curricula and time involved--Reading is a component of HEP Language Skills, with materials designed to provide individualized programs leading to sixthgrade achievement level. This is considered the stage of independent learning, and once a student reaches it (three or four years for many pupils) reading instruction per se disappears, and his program stresses reading widely, discussing what he reads, and learning techniques of understanding the subject he is reading about. Designed to accommodate all types of learners in the same multi-graded classroom, including slow and handicapped students, the curriculum is a continuum of objectives and experiences not restricted

by age or grade level, or tracked for ability level. At a given time, different amounts will have been accomplished by pupils at different levels

within each group.

About two hours a day is allocated to language arts in the elementary schools; the portion of this time used for reading varies at different levels. The reading skills period begins with a planning circle, where the teacher gives each child the opportunity, under her direction, to consider the range of activities available to him in the classroom and to make and discuss his own choice. The teacher strives to guide each student toward recognizing the mode of learning by which he can be most successful in each area, and she looks for specific signs of self-direction, ranging from "selects one of two activities suggested by the teacher" to "plans activities for a week at a time."

The planning circle and the evaluation circle at the end of the period are generally the only times that the class meets together as a whole; most of the other activities are done in small groups, in pairs, or individually. Peer-tutoring is seen as a valuable exercise for both learner and tutor, and each child who has successfully completed a particular skills component is given the opportunity to tutor another child in that component. Materials are designed to facilitate peer tutoring and teachers are trained in how to develop peer tutoring skills in children.

Materials and facilities—HEP materials use many non-textbook methods of presentation. Specific "modes" of instruction include the "book mode," but also such approaches as the "game mode," "film mode," "tape recorder mode," "typewriter mcde," "paper and pencil mode," and "stack mode." Generally, the first mode children work with is the "stack mode," punched cards on a rod attached to a base, which begin by teaching decoding skills of discrimination and recognition of symbols, letters, words, and finally linguistic patterns. Peer tutoring is often used here—the learner reading his card and the tutor checking him. The last group of cards in each stack, containing every word found in the stack, is used only by the teacher when checking a child. Diagnostic and evaluative instruments are built into all components of the program, and the record keeping system allows the teacher to keep track of each child's progress.

The program operates in regular classrooms which are, however, arranged in special ways to allow individualized work and use of multi-media instructional materials. From one- to four-room units may be used, divided into "stations" by movable partitions. These include stack stations with floor mats or cube and chairs, tape recorder and record player stations with bookcase for storage of records or tapes and books, typing station, writing station, language master station, etc. The center area has tables arranged for general study, and there is a special reading area with comfortable chairs and bookcases.

<u>Parent involvement--Parents</u> are kept informed about the program through printed materials. Additional information regarding parent involvement has been requested, but is not yet available.

Cost.

Total cost of the program as presently implemented in 170 Hawaii schools is \$4.471,060. Cost breakdowns given below do not include salaries.

Per-pupil cost--Annual per-pupil cost is about \$10.30.



Initial and maintenance cost--For a K-1 classroom of up to 180 students, the total cost of instructional materials is \$6,492. Amortized cost for 7 years is \$12,984, twice the initial figure, reflecting the need for total replacement of materials and equipment over a 7-year period. This works out to about \$10.30 per child per year, assuming 180 students yearly for 7 years, or a total of 1,260 children.

EVIDENCE OF EFFECTIVENESS: (See attached section.)



## EVIDENCE OF EFFECTIVENESS:

<u>Preliminary Note</u>: This has been the most rigorously controlled study we have encountered, with the most complete and best presented data. It even included audits by consultants of its data collection, and of the computer programs used. It was a pleasure to evaluate.

Evaluation conducted by. (1) George Y. Omura, Ed.D., Evaluation Specialist, Hawaii English Project, (2) Office of Instructional Services, Curriculum Development and Technology Branch, and (3) Review and Audit by Mark M. Greene, Director of Audit and Evaluation Section.

Sample size and method. Starting in the 1970-71 school year, the Hawaii English Program (HEP) was placed in at least one kindergarten or kindergarten-first grade classroom in every school in Hawaii. This was extended to higher grades in the subsequent years until by the 1973-74 school year. it had reached the sixth grade and included 57 percent or 53,067 public elementary school children in the State. The most recent evaluations were done as follows:

- 1. Evaluation was restricted to second and third graders who have been in HEP or non-HEP since kindergarten.
- 2. It was restricted to intact classrooms with a single round of testing following treatment.
- 3. Schools were selected carefully so as to equate them in terms of mean school IQ at each level of analysis.
- 4. A second subsample was constructed from the total sample by selecting equal numbers of HEP and non-HEP children for each level of analysis, but through random selection of Varying numbers from each school so as to exactly equate the mean IQ's.
- 5. To allow for and test the interaction of classroom organization and treatment, a stratification of 3-on-2 and traditional or self-contained classrooms was made.
- 6. Every attempt was made to test all students at a school, while meeting restrictions of treatment condition.
- · 7. Only students with complete data for all variables were retained, making a total of 575 children. The smallest single sample used for any single comparison was 50.

TABLE 1. Sample

	Mean IQ		Sample With Complete Data		Number of Schools			
Grade	HEP	Non-HEP	HEP	Non-HEP	HEP	Non-HEP		
-2	93.7	93.4	95(69%)	56(69%)	7	5	3-on-2	
3	93.7	93.3	76(62%)	65 (75%)	7	6	Classrooms	
2	95.3	95.8	63(88%)	69(64%)	4	5	Self-contained Classrooms	
3	93.0	94.7	59 (77%)	92(70~)	4	6		

Comparison methods. HEP and non-HEP Means on several facets of reading and language ability, using at least two test batteries, were compared. To



refine further the effects of the block-matching methods, five covariates (sex, age, educational level, occupational status of head of household, and non-English-speaking parents) were used to produce adjusted means (by analysis of covariance).

Comparisons were made:

1. for the two grades separately,

2. for the two classroom organizations separately and together,

3. all comparisons were made for all students with complete data, and again for a subset of 200 students in each of the two grades,

4. all the above comparisons were made for both adjusted means, and for original (unadjusted) means. (The effects of the adjustments were universally the more conservative, and will be the only ones discussed here.)

Measures. Tests used were as follows:

1. The California Test of Mental Maturity was used to measure IQ (median reliability .93).

2. Special measures were devised for the five covariate measurements

(reliabilities not given).

3. The Gates-MacGinitie Reading Test (reliabilities for subtests from .78 to .89) and their own Individualized Language Skills Test (reliabilities not given) with Standard Scores being used on the former, and Raw Scores on the latter.

Data collection. This was undertaken under the auspices of the Office of Instructional Services, Curriculum and Technology Branch, who, in another context report particular attention to "...acceptable test administration practices...", "...validity...", etc.

<u>Data analysis</u>. Descriptive statistics used were means, and weighted means (for stratifications) sample sizes, class sizes, percentages, adjusted means (after covariance analysis), standard deviations, standard errors and significance tests.

Inferential statistics involved analysis of covariance and F-tests.

Changes in outcome and their reliability. In every single case of concern to us (i.e., all possible comparisons on all measures of relevance to reading) the HEP samples had higher mean performances than the non-HEP. The average of some 72 comparisons was .33 standard deviations advantage for HEP, with 44 of 72 being significant at the .05 level or better.

The advantages seemed generally to be larger for the 3-on-2 classrooms than for self-contained ones, and larger for grade 2 than for grade 3.

(It should be noted that we have duplicate studies for adjusted and unadjusted means; the former being the more conservative, are the only ones discussed here).

On the most important criteria of Paragraph Reading and Reading Comprehension on the Individualized Language test, and the Comprehension Test of the Gates-MacGinitie, 9 of the 12 comparisons yielded educational significances of .3 SD or higher.

Educational significance. Table 2 below summarizes the performances and findings on the aspects of crucial importance, namely vocabulary, and reading ability and comprehension.



TABLE 2. Educational Gains in SD

	Gates-Ma	cGinitie	Individual				
Grade	.Vocab.	Compr.	Word Recog.	Parag.Rdg.	Rdg.Compr.		
2	.48	. 33	. 50	. 44	. 44	3-on-2 Classrooms	
3	.31	.08	.41	.31	.28		
2.	.21	. 30	. 24	. 32	. 37	Self-cont.	
3	.04	.11	. 34	. 37	.58	Classrooms	

The average gain of the 20 comparisons is .323. This would mean that if, on the basis of the mean IQ's we were to expect 60 percent of students to be reading below grade level, the HEP would reduce this figure to 48 percent.

